

ABSTRACT

A circular dial buffer is implemented in appropriate random access memory (RAM) accessible by a DSP for the purpose of storing DTMF digits to be generated and output on, e.g., a telephone line. To the processor, the DSP appears to behave much like an off-the-shelf stand alone touch tone dialer, with the exception that the DSP does not have access to a keypad input. Instead, in addition to speed dial capabilities, mimicked keypad input is transmitted by a controller to the DSP rather than timing information. Thus, instead of requiring the input of rows and columns or other information relating to button activation on a connected keypad to input touch tone digits, the principles of the present invention allow mimicking of keypad input using commands sent by the controller to the DSP, e.g., a first command indicating that a mimicked, manually operated key is being pressed, and a second command indicating that the mimicked key has been released. Thus, the processor in a processor/DSP telephony system is no longer required to send precisely timed start/stop commands at precise intervals for directing the timing of a DTMF generator implemented in the DSP. Instead, touch tone digit commands may be sent by the processor to the circular dial buffer in the DSP as fast as the processor-to-DSP interface will permit. Accordingly, the present invention provides for the generation of DTMF tone signals from a DSP either based on pre-programmed timing parameters for automatic dialing, but also in accordance with mimicked keypad activity transmitted from the controller to the DSP to affect a true DTMF dialer in the DSP.

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